



CLIMATE CHANGE ADAPTATION AND IMPLEMENTATION PLAN

- CENTRAL ANATOLIA REGION, TÜRKİYE
- UPREPARED FOR REGIONAL CLIMATE RESILIENCE

PRESENTATION 2025

START NOW



More Information
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WHY ADAPTATION IS CRITICAL

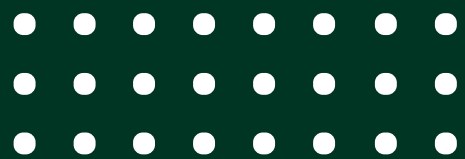
- Increasing temperatures and prolonged droughts
- Water scarcity and soil degradation
- Threats to agriculture, public health, and infrastructure
- Protecting livelihoods and ecosystems is essential





SECTORS MOST AT RISK

- **Agriculture & Livestock**
- **Water Resources**
- **Forestry & Biodiversity**
- **Energy (Hydropower & Thermal)**
- **Public Health**
- **Urban Infrastructure**
- **Tourism & Cultural Heritage**

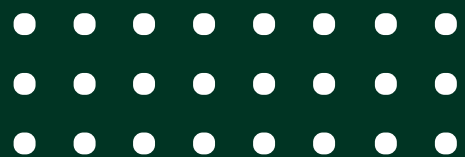




SOLUTION

ADAPTATION PRINCIPLES

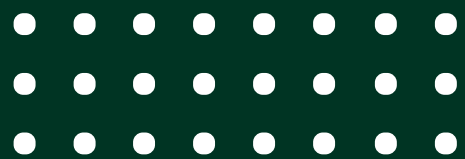
- Focus on long-term resilience
- Blend of nature-based and tech solutions
- Community participation
- Institutional coordination and data sharing





AGRICULTURE & LIVESTOCK

- Drought-tolerant crops and modern irrigation
- Fodder banks and rotational grazing
- Soil conservation techniques
- Early warning systems for farmers





AGRICULTURE AND LIVESTOCK ADAPTATION ACTIONS

Improve Water Efficiency in Farming

- Transition from flood irrigation to modern water-efficient systems.
- Optimize groundwater use and reduce water wastage.
- Encourage adoption of precision irrigation technologies.

Introduce Drought-Resistant Crops and Diversify Production

- Shift to drought-tolerant crop varieties.
- Promote crop diversification and mixed agro-pastoral systems.
- Strengthen financial resilience via insurance and subsidies for climate-smart practices.

Sustainable Rangeland and Livestock Management

- Enhance rangeland health and reduce overgrazing.
- Improve livestock adaptability to climate stress.
- Stabilize fodder supply to handle drought periods.

Enhance Soil Conservation and Rainwater Harvesting

- Apply conservation tillage and erosion control practices.
- Harvest rainwater for agricultural use.
- Integrate agroforestry to protect soil and reduce wind erosion.

Expand Climate Information and Early Warning Services

- Improve access to climate forecasts and drought warnings.
- Empower farmers with real-time climate data for informed decision-making.



SALT LAKE DRYING IN CENTRAL ANATOLIAN REGION





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WATER RESOURCES CLIMATE ADAPTATION ACTIONS

Integrated Basin-Scale Water Management

- Coordinate water allocation across entire basins to balance supply and demand.
- Prioritize drinking water and ecological flows during droughts.
- Strengthen drought resilience through regional cooperation.

Rainwater Harvesting and Greywater Reuse

- Promote rainwater harvesting in both rural and urban environments.
- Encourage greywater reuse for non-drinking purposes.
- Reduce dependency on surface and groundwater during dry periods.

Enhance Water Storage and Supply Infrastructure

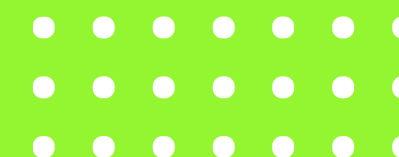
- Increase water storage capacity to capture excess during wet periods.
- Upgrade distribution systems to minimize leakage.
- Recharge aquifers and restore natural water buffers.

Water Conservation Policies and Pricing

- Promote water-saving behaviors in households, agriculture, and industry.
- Design fair water tariffs that reflect scarcity and reward efficient use.
- Limit non-essential water use during drought periods.

Drought Monitoring and Emergency Planning

- Monitor climate and hydrological conditions in real-time.
- Activate drought response protocols and secure emergency water reserves.
- Mitigate social and economic impacts through proactive planning.



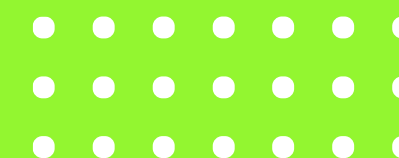


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FORESTRY & BIODIVERSITY

- **Afforestation and habitat restoration**
- **Wildfire risk reduction and rapid response**
- **Biodiversity monitoring and gene banks**
- **Ecological corridors for species migration**





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ADAPTATION ACTIONS

Afforestation and Reforestation Campaigns

- Expand tree planting to reduce erosion, desertification, and biodiversity loss.
- Support carbon storage and microclimate regulation by restoring degraded lands.

Strengthen Wildfire Management and Prevention

- Enhance fire detection, prevention, and rapid response.
- Improve community-level readiness for wildfires.

Conserve Biodiversity and Enable Ecosystem Adaptation

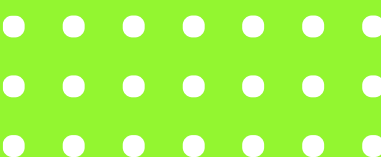
- Protect natural habitats and maintain species diversity.
- Facilitate wildlife movement and adaptation to climate shifts.

Integrated Watershed Management for Ecosystem Resilience

- Manage land, soil, and water in an integrated way to strengthen ecosystems.
- Reduce erosion and maintain downstream water availability.

Research and Gene Bank Initiatives

- Preserve plant and animal genetic diversity for future climate resilience.
- Strengthen scientific research on ecosystem adaptation and assisted migration.



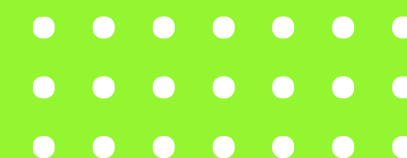


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ENERGY SECTOR

- **Transition to solar and wind**
- **Optimize hydropower for variable flows**
- **Upgrade cooling systems in thermal plants**
- **Encourage demand-side energy efficiency**





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ADAPTATION ACTIONS

Diversify Energy Sources Away from Water-Dependent Generation

Focus: Transition away from energy systems that rely heavily on water (hydropower, thermal plants) by developing renewable energy capacity to secure supply during droughts and water scarcity.

Optimize Hydropower Operations and Infrastructure

Focus: Adapt existing hydropower facilities to function effectively under variable river flows by applying dynamic management and technical upgrades.

Improve Cooling System Resilience for Thermal Power Plants

Focus: Enhance thermal plant operations by retrofitting cooling systems to use less water and operate reliably during extreme heat.

Institutional Coordination for Energy and Climate Planning

Focus: Establish coordinated planning mechanisms that integrate climate risk assessments into energy infrastructure development and emergency response strategies.

Enhance Grid and System Resilience

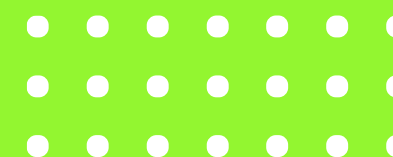
Focus: Modernize and reinforce the electrical grid to withstand extreme weather events and ensure continuous power supply.

Develop Microgrid and Distributed Energy Systems

Focus: Promote localized energy systems (microgrids, off-grid renewable solutions) to improve energy resilience at the community level.

Integrate Predictive Modeling and Forecasting into Operations

Focus: Use advanced climate and load forecasting models to guide adaptive operations and improve real-time decision-making in energy management.



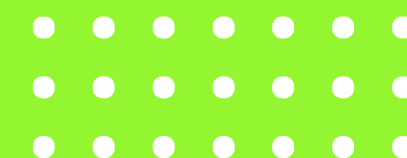


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PUBLIC HEALTH

- **Heatwave alert systems**
- **Climate-resilient healthcare facilities**
- **Disease surveillance and vector control**
- **Community health awareness programs**





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ADAPTATION ACTIONS

Heatwave Early Warning Systems and Response Plans

Protect residents from extreme heat by enhancing early warning systems and community readiness.

Strengthen Climate-Resilient Healthcare Infrastructure

Ensure that hospitals and clinics remain functional during extreme weather events, power outages, and floods.

Disease Surveillance and Vector Control

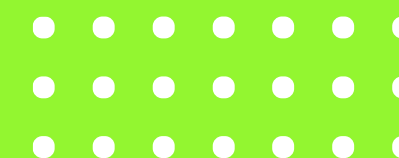
Monitor, prevent, and respond to climate-sensitive diseases and zoonotic infections.

Public Education and Community Resilience Programs

Raise awareness and build local capacity to respond to climate-related health risks.

Integrate Climate Change into Public Health Planning and Policy

Embed climate considerations into health strategies, including risk assessments and policy development.



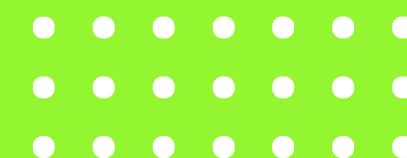


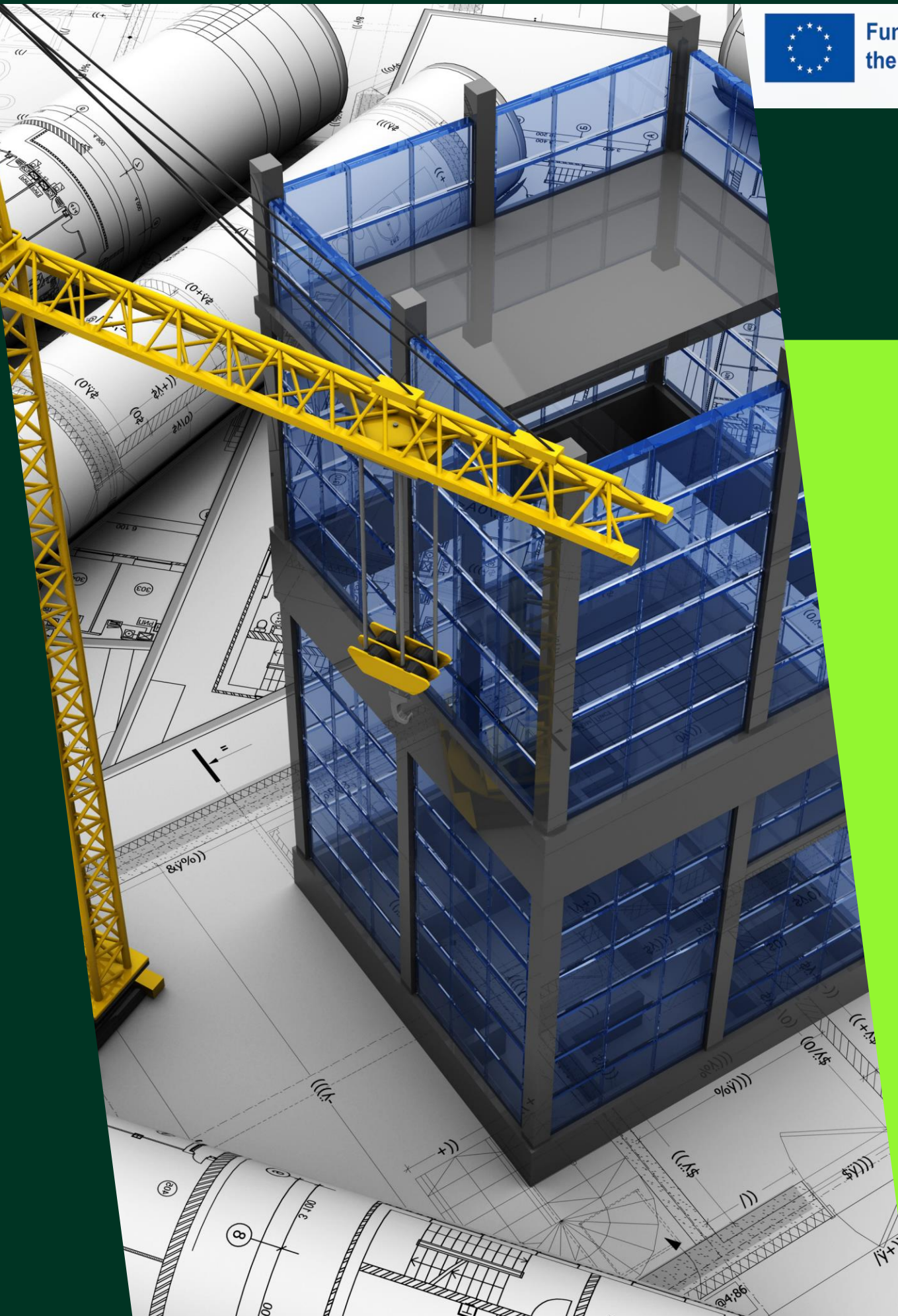
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URBAN INFRASTRUCTURE

- Upgrade stormwater systems and flood defenses
- Increase green areas and reflective surfaces
- Climate-proof roads, buildings, and utilities
- Integrate resilience in city planning





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ADAPTATION ACTIONS

Urban Flood Management and Drainage Upgrades

Reduce flood risk by enhancing and modernizing urban drainage systems and restoring natural waterways.

Mitigating Urban Heat Islands with Green and Cool Infrastructure

Lower urban temperatures and improve comfort during heatwaves by integrating green and reflective infrastructure.

Climate-Proofing Critical Infrastructure and Buildings

Upgrade essential urban infrastructure (buildings, transport networks, utilities) to be resilient against heat, storms, and floods.

Emergency Preparedness and Disaster Risk Reduction in Urban Areas

Ensure that cities can respond quickly and effectively to climate-related disasters through advanced early warning systems and coordinated emergency plans.

Integrate Climate Adaptation into Urban Planning and Development

Embed resilience into the planning and redevelopment processes to ensure that new urban developments are designed with future climate risks in mind



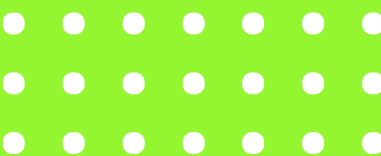


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TOURISM & CULTURAL HERITAGE

- **Promote off-season tourism**
- **Climate-proof heritage sites**
- **Water and energy-efficient accommodations**
- **Support local and eco-tourism**





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ADAPTATION ACTIONS

Shift and Expand the Tourism Season

Reduce pressure on peak summer months by encouraging visits during the shoulder seasons (spring and autumn).

Improve Water and Energy Efficiency in Tourism Facilities

Help tourism businesses minimize resource usage while maintaining a comfortable guest experience.

Climate-Proof Tourist Attractions and Heritage Sites

Protect natural and cultural assets from the negative impacts of heat, erosion, and extreme weather events.

Community-Based and Niche Tourism Development

Diversify tourism products to spread risk and generate year-round benefits for local communities.

Policy Integration and Inter-Sectoral Coordination

Align tourism development with broader climate adaptation and regional planning strategies.



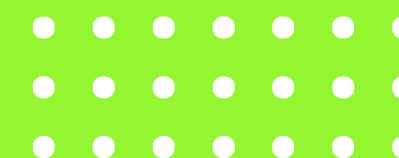


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GET INVOLVED

- **Adopt green practices**
- **Stay informed and engaged**
- **Support local initiatives**
- **Work together for a resilient future**



THANK YOU FOR YOUR ATTENTION

"Together, we can contribute to a sustainable future"

Questions & Discussion

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